

## **REMARKS**

### **Status of the Claims**

Claims 1-13, 15-24, 26-33 and 35-37 are pending in this application.

Claims 1-13, 15-24, and 26-23 are rejected.

Claims 14, 25 and 34 have been cancelled.

Claims 35-37 have been added.

Claims 1, 7, 10, 15, 18, 21, 26, 27 and 30 have been amended. Support for these amendments can be found throughout the specification, claims, and drawings, as originally filed.

### **DOUBLE PATENTING REJECTION**

The Office Action indicated that claims 1-6, 8, 15, 16 and 19 were provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-4, 6, 7, 9, 10, 12, and 15 of co-pending application no. 10/821,740. With this response, Applicant has made amendments to the claims which further distinguish the claims of the present application from co-pending application no. 10/821,740. Applicant respectfully requests reconsideration before any type of double patenting rejection is asserted.

### **35 USC §112 REJECTION, SECOND PARAGRAPH**

Claims 1-13, 15-24, and 26-33 stand rejected under 35 USC § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention. Applicant respectfully traverses this rejection.

In regard to the rejection of claims 1, 15 and 26 the Office Action indicated that the words "a pressure supply passage at a first end" and "a radially extending pressure control passage" is not supported by the specification. Applicant has reviewed the claim and the specification and has amended claims 1, 15, 26 to recite "a pressure supply passage connected to said control body and a control passage in said central cavity." Applicant believes that the amendments to claims 1, 15 and 26 are fully supported by the specification, therefore, the rejection of claims 1, 15 and 26 have been obviated by amendment. Removal of the rejection is respectfully requested.

With regard to rejected claims 7, 18 and 27 Applicant has deleted all of the rejected language and has amended claims 7, 18 and 27 in a manner that is fully supported by the base claim as well the specification. Removal of the rejection is respectfully requested.

With regard to claims 10, 21 and 30 the Office Action indicated that the limitation "said coil member" lacks sufficient antecedent basis. Applicant has amended claims 10, 21 and 30 to recite "said coil" which has sufficient antecedent basis. Therefore Applicant respectfully requests removal of the rejection of claims 10, 21 and 30.

#### **Rejection of Claims 1, 7, 8, 12 and 13 Under 35 U.S.C. § 103**

Claims 1, 7, 8, 12 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,807,846 to Greiner (hereafter Greiner '846). The Applicant respectfully traverses the 35 U.S.C. § 103(a) rejection of claims 1, 7, 8, 12 and 13.

The Office Action indicated that Greiner '846 teaches or suggests all of the limitations of the rejected claims. Applicant maintains that Greiner '846 fails to teach or suggest the "feed supply tube being supported in said central cavity of said fluid control body by way of a radially and axially extending wall." See claim 1 from which claims 7, 8, 12, and 13 depend. Secondly, Applicant maintains that Greiner '846 fails to teach or suggest "...said wall having a plurality of longitudinally extending flow chambers." See claim 1 from which claims 7, 8, 12 and 13 depend. Third, Applicant maintains that Greiner '846 fails to teach or suggest "flow chambers in communication with said pressure control passage." See claim 1 from which claims 7, 8, 12 and 13 depend. Lastly, Applicant maintains that Greiner '846 fails to teach or suggest "said feed supply tube including a valve receiving area...a valve seat portion...press fit into said valve receiving area." See claim 1 from which claims 7, 8, 12, and 13 depend. Applicant will now in greater detail discuss the above points with respect to Greiner '846.

Applicant maintains that rejected claims 1, 7, 8, 12 and 13 contain the limitation of a "feed supply tube being supported in said central cavity of said fluid control body by way of a radially and axially extending wall." See claim 1. The Office Action identified the feed supply tube as element 40 in the drawings and indicates that Figs. 1 and 2 show the feed supply tube being supported in the central cavity by way of a radially and axially extending wall. The specification of Greiner '846 in pertinent part states "[a]ccording to the invention, a plastic bushing 40 is mounted on the outer circumference of the guide 36, such that it rests tightly on the guide 36." See col. 3, lines 16-18. This means that the bushing (40) of Greiner '846 is not supported in the fluid control body by way of a radially and axially wall as recited in the rejected claims of the present application. The figures of Greiner '846 do show a portion of the plastic

bushing (40) that extends radially away from the bushing (40). However, the specification of Greiner '846 further states that:

“the end of the plastic bushing 40 which rests on the poles 8, 10 surrounds the armature 27, with play underneath and is provided with an upper circumferential knife edge 42 so as to assure the tight as possible contact of the plastic bushing 40 with the core end face 39 and avoid a direct flow of fuel to the remnant air gap 31.” See col. 3, lines 23-29 [emphasis added].

Thus Greiner '846 teaches or suggests that the portion of the plastic bushing (40) that rests on the poles (8, 10) does not support the bushing in the fluid control body, but rather contacts the poles 8, 10 and surrounds the armature 27 “with play”. Therefore, Applicant maintains that Greiner '846 teaches away from the use of supporting the feed supply tube in a central cavity of the fluid control body by way of a radially and axially extending wall because the portion of the bushing (40) that extends radially and axially surrounds the armature “with play”. Furthermore, the specification teaches that the bushing (40) is supported by the guide (36). For these reasons, Applicant maintains that Greiner '846 fails to teach or suggest all of the elements of claims 1, 7, 8, 12 and 13.

With regard to Applicants second point of distinction between the rejected claims and Greiner '846, Applicant argues that the rejected claims state “..said wall having a plurality of longitudinally extending flow chambers...” See claim 1 from which claims 7, 8, 12 and 13 depend. The Office Action indicated that the feed supply tube (i.e., identified as bushing 40 in Greiner '846) has a radially and axially extending wall segmented into longitudinally extending flow chambers as shown in Figs. 1 and 2. A review of the figures of Greiner '846 show a bushing (40) having grooves (44) on its surface. The specification of Greiner '846 in pertinent part states:

"longitudinal grooves 46 are provided in the jacket face of the plastic bushing 40, extending in the direction of the longitudinal axis of the valve thus assuring an unthrottled flow of the fuel in the annular conduit 35 to the radial bores 37. See col. 3, lines 35-39.

The claims of the present application contain the limitation of "longitudinally extending flow chambers" which are different from longitudinal grooves 46. The grooves 46 of Greiner '846 form a flow portion between the bushing (40) and annular conduit (35). See Fig. 2. Thus the bushing (40) does not have flow chambers, rather it is the combination of the bushing (40) and annular conduit (35). Applicant maintains that this is not the same as a flow chamber as recited in the claims of the present application.

Applicant's third argument is that the rejected claims state the plurality of longitudinally extending flow chambers are "...in communication with said pressure control passage." See claim 1 from which claims 7, 8, 12, and 13 depend. As quoted earlier, Greiner '846 indicates that the longitudinal grooves (46) are used to assure the unthrottled flow of fuel to the annular conduit 35. This is not in communication with the pressure control passage. The Office Action has identified the pressure control passage as label "50". The specification of Greiner '846 identified element (50) as a fuel delivery connection which delivers fuel to the flow bore (22). See col. 2, lines 47-54. Thus, the fuel delivery connected (50) of Greiner '846 is actually the supply since it supplies fuel to the valve. Therefore Greiner '846 does not teach or suggest longitudinally extending flow chambers in communication with the pressure "control passage". For this reason, Applicant maintains that Greiner '846 does not teach or suggest all of the limitations of the rejection claims of the application.

With regard to Applicants third argument the claims of the present application state "said feed supply tube including a valve receiving area...a valve seat

portion...press fit into said valve receiving area" with a "...valve contained in said valve receiving area". See claim 1 from which claims 7, 8, 12 and 13 depend. The Office Action indicated that a valve seat portion (17) is press fit into the control body and has a valve seat portion (23) and passage (22) with a valve (26, 28, 29). The rejected claims state that the valve seat portion is press fit into a valve receiving area. See claim 1 of the present application. The valve receiving area is included within the feed supply tube. See claim 1 of the present application. The Office Action states that the feed supply tube is identified as structure (40) in Greiner '846. The claims of the present application require that the valve is contained in the valve receiving area. See claim 1 from which claims 7, 8, 12, and 13 depend. A review of the drawings and specification of Greiner '846 show what has been identified as the valve seat portion (17) press fit onto the element (40). The specification of Greiner indicates that 40 is a plastic bushing that is mounted on the outer circumference of the guide 36 which as shown in the figures is clearly part of the valve seat body (17). See col. 3, lines 16-18. The valve and valve seat of Greiner '846 are located at the bottom of the valve seat body (17) which is a great distance away from the bushing (40) and its contact point with the guide (36). Therefore Applicant maintains that Greiner '846 does not teach or suggest a valve contained in the valve receiving area which has been identified in the claims as the valve seat portion being press fit into the valve receiving area which is part of the feed supply tube. See claim 1 from which claims 7, 8, 12 and 13 depend. For all of the above reasons Applicant argues that Greiner '846 does not teach, suggest or motivate one of ordinary skill in the art to arrive at the claimed invention as set forth in claims 1, 7, 8, 12 and 13. Clearly, the claims of the present application are not taught or suggested by Greiner '846. Removal of the rejection and allowance of the claims is respectfully requested.

### **Rejection of Claims 2, 3, and 10 Under 35 U.S.C. § 103**

Claims 2, 3 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,807,846 to Greiner (hereafter '846) in view of U.S. Patent No. 6,029,703 to Erickson (hereafter Erickson '703). The Applicant respectfully traverses the 35 U.S.C. § 103(a) rejection of claims 2, 3, and 10.

Claims 2, 3, and 10 are either directly or ultimately dependent from independent claim 1 of the present application. As discussed above, Greiner '846 fails to teach or suggest all of the limitations of independent claim 1 from which claims 2, 3 and 10 depend. Applicant maintains that Greiner '846 fails to teach or suggest the "feed supply tube being supported in said central cavity of said fluid control body by way of a radially and axially extending the wall." See claim 1. Secondly, Applicant maintains that Greiner '846 fails to teach or suggest "...said wall having a plurality of longitudinally extending flow chambers." See claim 1. Third, Applicant maintains that Greiner '846 fails to teach or suggest flow chambers in communication with said pressure control passage. Lastly, Applicant maintains that Greiner fails to teach or suggest "feed supply tube including a valve receiving area...a valve seat portion...press fit into said valve receiving area." See claim 1. Applicant maintains that the proposed combination of Greiner '846 in view of Erickson '703 when taken in combination fail to resolve the above mentioned deficiencies. Erickson '703 teaches a solenoid control valve that includes an internal chamber and a pair of sealing lands that selectively seal a supply port and a control port within the valve body. There is nothing in Erickson '703 or Greiner '846 that teach or suggest a feed supply tube supported in a central cavity of the food control body by way of a radially and axially extending wall. Secondly, there is nothing in Erickson '703 or Greiner '846 that teach or suggest any type of plurality of longitudinally extending flow chambers through an axially and radially extending wall.

Furthermore, the combination of Greiner '846 in view of Erickson '703 fail to teach or suggest a feed supply tube with a valve receiving area, a valve seat portion that is press fit onto the valve receiving area. The sealing lands 98 of Erickson '703 are connected to a one piece member. There is nothing in Erickson '703 that teach or suggest any type of press fit on the land 98 or the portion that forms the land 72. For these reasons the proposed combination of Greiner '846 in view of Erickson '703 fails to render claims 2, 3, and 10 obvious. Removal of the rejection is requested.

### **CONCLUSION**

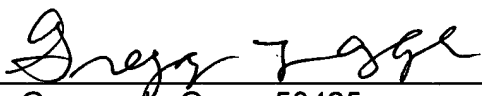
It is respectfully submitted that in view of the above amendments and remarks that claims 1-13, 15-24, 26-33 and 35-37, as presented, are patentably distinguishable because the cited patents, whether taken alone or in combination, do not anticipate or render obvious, the claims of the present invention. Therefore, Applicant submits that the pending claims are properly allowable, which allowance is respectfully requested.

The Examiner is invited to telephone the Applicant's undersigned attorney at (248) 364-4300 if any unresolved matters remain.

Respectfully submitted,

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